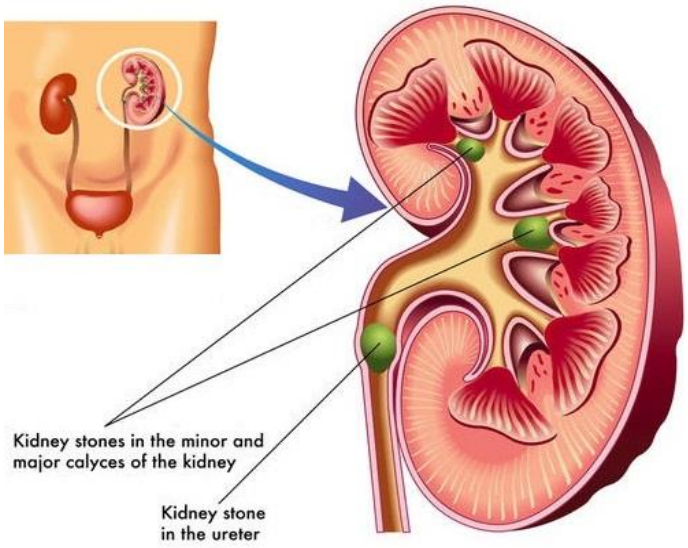
STUDY GUIDE

RENAL & EXCRETORY SYSTEM-II MODULE

THIRD YEAR MBBS SEMESTER 6

27th June – 28th July 2018



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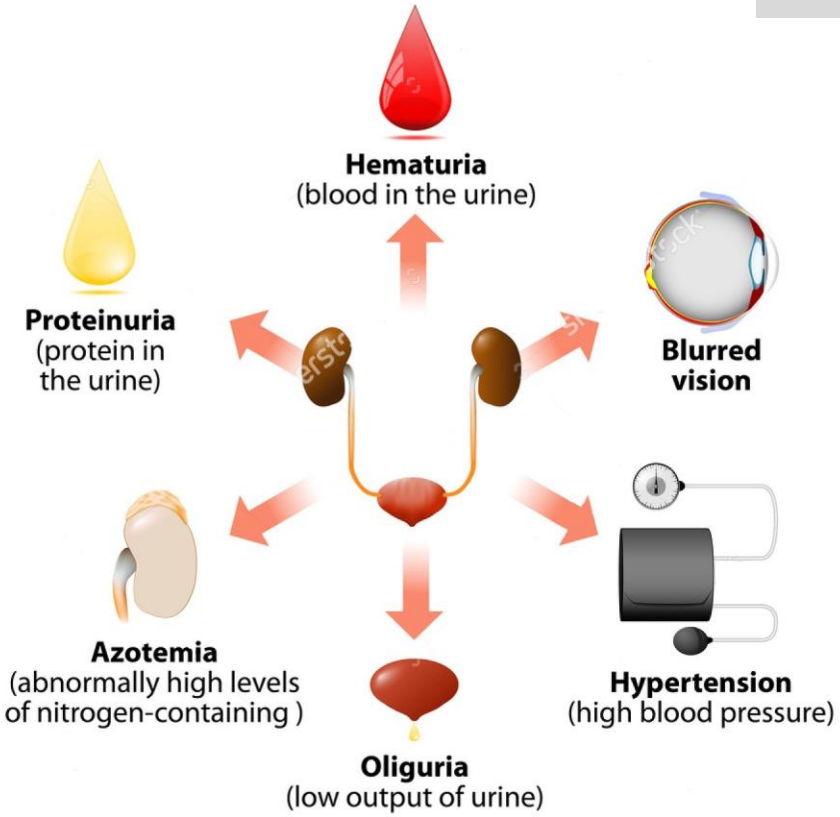

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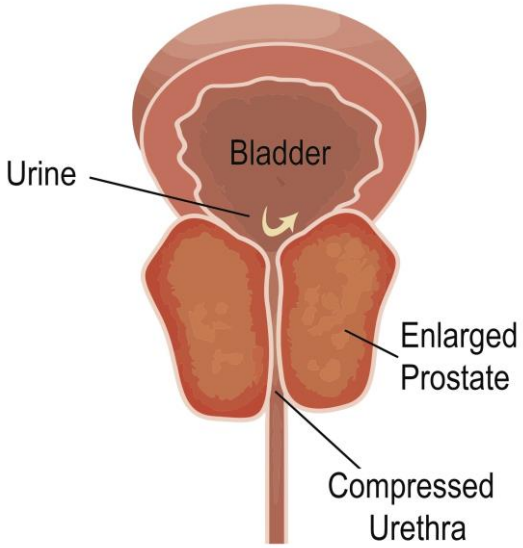


BENIGN PROSTATIC HYPERPLASIA

LIAQUAT NATIONAL HOSPITAL & MEDICAL COLLEGE

STUDY GUIDE FOR RENAL & EXCRETORY SYSTEM-II MODULE

Module name: **Renal & Excretory System-II**

Semester: **Six** *Year:* ***Three*** *Duration:* ***4 weeks (June - July 2018)***

Timetable hours: **Lectures, Case-Based Integrated Learning (CBIL), Clinical Rotations, learning experience in LNH outreach centers, Laboratory, Practical, Demonstrations, Skills, Self-Study**
Credit hours: **3 credit hours in theory and 1.5 credit hours in practical**

MODULE INTEGRATED COMMITTEE

MODULE COORDINATOR:	• Dr. Kunwer Naveed (Nephrology)
CO-COORDINATORS:	• Professor Nighat Huda (DHCE) • Dr. Farzana Adnan (Nephrology)

DEPARTMENTS' & RESOURCE PERSONS' FACILITATING LEARNING

BASIC HEALTH SCIENCES	CLINICAL AND ANCILLARY DEPARTMENTS
ANATOMY • Professor Zia-ul-Islam	***NEPHROLOGY*** • Dr. Kunwer Naveed • Dr. Farzana Adnan
COMMUNITY MEDICINE • Professor Rafiq Soomro	***PEDIATRIC SURGERY*** • Professor Shabbir Hussain
FORENSIC MEDICINE • Professor Murad Zafar Marri	***PEDIATRICS*** • Prof. Samina Shamim • Dr. Atika Sher
PATHOLOGY • Professor Naveen Faridi • Dr. Atif Hashmi	***UROLOGY*** • Dr. Aziz Abdullah
PHARMACOLOGY • Professor Nazir Ahmad Solangi	***RADIOLOGY*** • Dr. Ayoub Mansoor • Dr. Roomi Mahmud
PHYSIOLOGY • Professor Syed Hafeez-ul-Hassan	***RESEARCH & SKILLS DEVELOPMENT CENTER*** • Dr Kahkashan Tahir
DEPARTMENT of HEALTHCARE EDUCATION Prof Nighat Huda Dr. Mirza Aroosa Beg Dr. Sobia Ali Dr. Afifa Tabassum Dr. Muhammad Suleman Dr. Mehnaz Umair	
LNH&MC MANAGEMENT • Professor Amir Ali Shoro, Dean & Principal, Director FHS LNH&MC • Dr. Shaheena Akbani, Controller A.A & R.T LNH&MC	
STUDY GUIDE COMPILED BY: Dr. Mehnaz Umair*, Department of Health Care Education*	

INTRODUCTION

WHAT IS A STUDY GUIDE?

It is an aid to:

- Inform students how student learning program of the semester-wise module has been organized
- Help students organize and manage their studies throughout the module
- Guide students on assessment methods, rules and regulations

THE STUDY GUIDE:

- Communicates information on organization and management of the module.
  This will help the student to contact the right person in case of any difficulty.
- Defines the objectives which are expected to be achieved at the end of the module.
- Identifies the learning strategies such as lectures, small group teachings, clinical skills, demonstration, tutorial and case based learning that will be implemented to achieve the module objectives.
- Provides a list of learning resources such as books, computer assisted learning programs, web- links, journals, for students to consult in order to maximize their learning.
- Highlights information on the contribution of continuous and semester examinations on the student's overall performance.
- Includes information on the assessment methods that will be held to determine every student's achievement of objectives.
- Focuses on information pertaining to examination policy, rules and regulations.

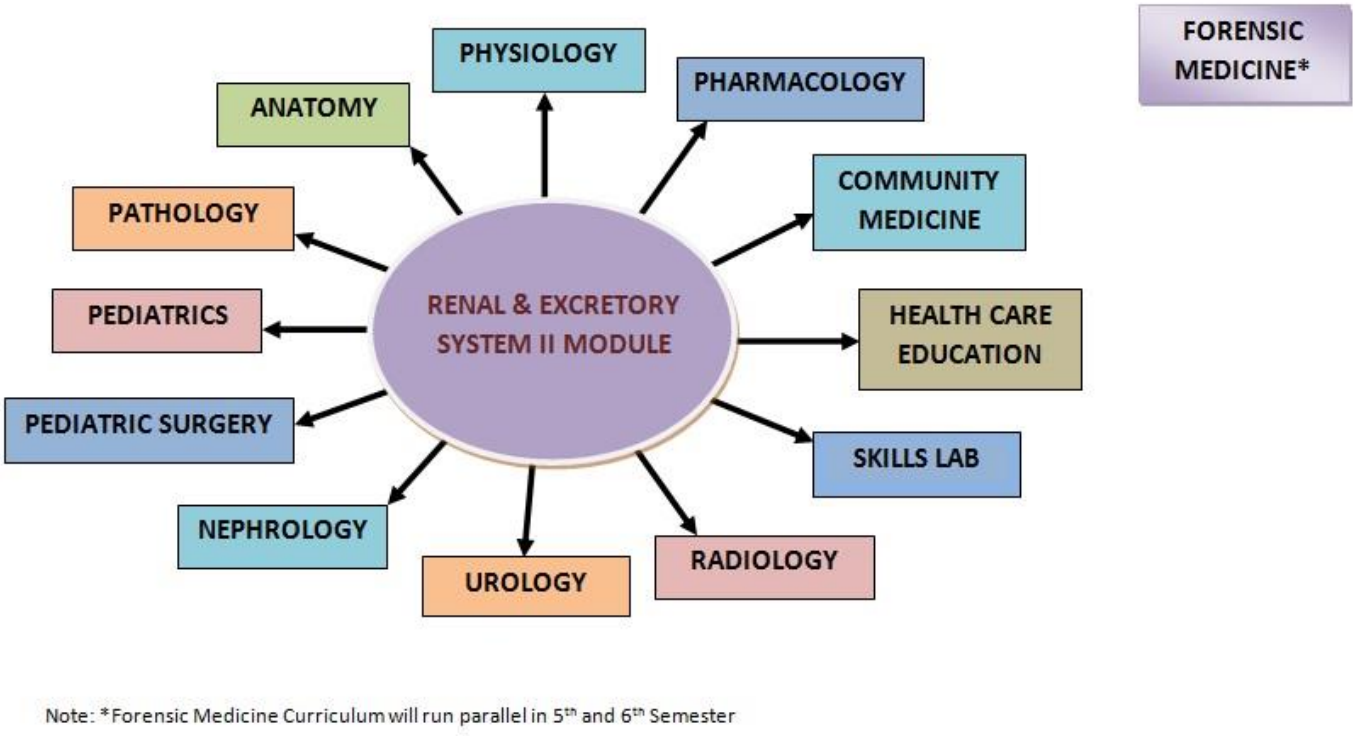
CURRICULUM FRAMEWORK

Students will experience *integrated curriculum* similar to previous modules of all 5 semesters**.**

INTEGRATED CURRICULUM comprises of system-based modules such as GIT & Liver II, Renal & Excretory System II and Endocrinology II which links basic science knowledge to clinical problems. Integrated teaching means that subjects are presented as a meaningful whole. Students will be able to have better understanding of basic sciences when they repeatedly learn in relation to clinical examples.

LEARNING EXPERIENCES: Case based integrated discussions, skills acquisition in skills lab. computer-based assignments, learning experiences in clinics, wards, and outreach centers.

INTEGRATING DISCIPLINES OF RENAL & EXCRETORY SYSTEM II MODULE



Note: *Forensic Medicine Curriculum will run parallel in 5th and 6th Semester

LEARNING METHODOLOGIES

The following teaching / learning methods are used to promote better understanding:

- Interactive Lectures
- Small Group Discussion
- Case- Based Integrated Learning (CBIL)
- Clinical Experiences
  - Clinical Rotations
  - Experience in LNH outreach centers
- Practicals
- Skills session
- Self-Directed Study

INTERACTIVE LECTURES: In large group, the lecturer introduces a topic or common clinical conditions and explains the underlying phenomena through questions, pictures, videos of patients' interviews, exercises, etc. Students are actively involved in the learning process.

SMALL GROUP SESSION: This format helps students to clarify concepts, acquire skills or desired attitudes. Sessions are structured with the help of specific exercises such as patient case, interviews or discussion topics. Students exchange opinions and apply knowledge gained from lectures, tutorials and self study. The facilitator role is to ask probing questions, summarize, or rephrase to help clarify concepts.

CASE- BASED INTEGRATED LEARNING (CBIL): A small group discussion format where learning is focused around a series of questions based on a clinical scenario. Students' discuss and answer the questions applying relevant knowledge gained previously in clinical and basic health sciences during the module and construct new knowledge. The CBIL will be provided by the concern department.

CLINICAL LEARNING EXPERIENCES: In small groups, students observe patients with signs and symptoms in hospital wards, clinics and outreach centers. This helps students to relate knowledge of basic and clinical sciences of the module and prepare for future practice.

- **CLINICAL ROTATIONS:** In small groups, students rotate in different wards like Medicine, Pediatrics, Surgery, Obs & Gyne, ENT, Eye, Family Medicine clinics, outreach centers & Community Medicine experiences. Here students observe patients, take histories and perform supervised clinical examinations in outpatient and inpatient settings. They also get an opportunity to observe medical personnel working as a team. These rotations help students relate basic medical and clinical knowledge in diverse clinical areas.
- **EXPERIENCE IN LNH OUTREACH CENTERS:** Learning at outreach centers of LNH have been organized and incorporated as part of training of third year medicinal students. The objective is to provide clinical training experiences for students in primary care settings.

PRACTICAL: Basic science practicals related to pharmacology, microbiology, pathology, forensic medicine, and community medicine have been schedule for student learning.

SKILLS SESSION: Skills relevant to respective module are observed and practiced where applicable in skills laboratory.

SELF-DIRECTED STUDY: Students' assume responsibilities of their own learning through individual study, sharing and discussing with peers, seeking information from Learning Resource Center, teachers and resource persons within and outside the college. Students can utilize the time within the college scheduled hours of self-study.

SEMESTER 6 MODULE 2 : RENAL & EXCRETORY SYSTEM-II

INTRODUCTION

Worldwide, an estimated 200 million people have chronic kidney disease (CKD) with people in the low-to-middle income countries of Asia and Sub-Saharan Africa have the highest rates of CKD [1]. In Pakistan common causes of CKD identified in the patients included diabetic nephropathy (140, 28%), glomerulonephritis (110, 22%), hypertension (73, 14.6%), tubulo-interstitial disease (67, 13.4%) and renal stone disease (40, 8%). The cause was unknown in a significant percentage of patients (53, 10.6%). Other causes including post-partum renal failure, which constituted 2% of the cases [2].

This module aims to equip medical undergraduates with the essential knowledge and skills required for dealing with prevalent renal disorders in the local context. This is the second module on renal and excretory system in MBBS course. The basics of renal and excretory system including anatomy, physiology, biochemistry, pathology and introduction to clinical presentations have been addressed in the first module. The module will focus on common diseases of the renal and excretory system, including infections, obstructive, genetics and acquired disorders and cancerous and non-cancerous renal and excretory diseases.

References:

1. Akinlolu Ojo (2014) Addressing the global burden of chronic kidney disease through clinical and translational research. *Transactions of the american clinical and climatological association, vol. 125, 2014*
2. Kifayat Ullah, Ghias Butt, Imtiaz Masroor, Kinza Kanwal, Farina Kifayat (2015) Epidemiology of chronic kidney disease in a Pakistani population. *Saudi Journal of kidney diseases and transplant, 2015 Nov;26(6):1307-10. doi: 10.4103/1319-2442.168694*.

COURSE OBJECTIVES AND STRATEGIES

At the end of the module the students will be able to:

TOPICS & OBJECTIVES	FACULTY	LEARNING STRATEGY
OVERVIEW, CONGENITAL ANOMALIES, UTI, UROLITHIASIS		
• Describe the gross and microscopic structure of renal system • Correlate the anatomic basis of renal signs & symptoms	Anatomy	Interactive Lectures
• Describe the development and congenital anomalies of renal system		
• Classify cystic diseases of the kidneys • Discuss genetics, pathogenesis, morphology and clinical features of autosomal dominant, autosomal recessive and polycystic kidney disease • Describe cystic diseases of renal medulla	Pathology	Interactive Lecture
• Interpret urine analysis • Demonstrate proteinuria in a given sample of urine by Lab/Dipstix Method		Practical
• Describe the procedure of performing urine C/S		
• Explain renal function tests • Interpret renal function tests (RFT)	Nephrology	Interactive Lecture
• Demonstrate steps of Foley's catheterization	Skills Lab	Small Group Discussion with Hands On
• Discuss causes, pathogenesis, morphology and clinical features of Hydronephrosis • Describe the four main types of renal stones and their pathogenesis	Pathology	Interactive Lectures
• Identify etiologies and patho-physiology for upper and lower urinary tract infections		
• Identify treatments and medications used in the management of renal calculus urolithiasis	Urology	Interactive Lectures
• Analyze clinical signs and symptoms of major renal and urinary tract diseases		
• Classify diuretics, mechanism of action, therapeutic uses, pharmacokinetic profile and adverse effects of diuretics	Pharmacology	Interactive Lecture
• Evaluate a patient with diseases of the kidneys and urinary tract • Describe the effects and management of obstructive	Urology	Interactive Lecture

urinary tract disease		
• Identify common infectious etiologies for upper and lower urinary tract infections • Analyze clinical signs and symptoms of common renal diseases to construct a differential diagnosis • Describe the approach for evaluating and treating common renal diseases	Pediatrics	Interactive Lecture
• Describe the development of urinary system, normal structure, blood supply, innervations, lymphatic drainage functions and its congenital anomalies	Pediatrics Surgery	Interactive Lecture
ACUTE KIDNEY INJURY AND GLOMERULONEPHRITIS		
• Explain therapeutic applications of diuretics • Explain nephrotoxic drugs • Explain drugs used in renal failure	Pharmacology	Case-Based Discussion
• Classify specific renal diseases according to three major components on the basis of glomerular, vascular and tubulointerstitial types • Discuss pathogenesis of glomerular diseases	Pathology	Interactive Lecture
• Discuss the etiology and diagnosis of the common renal diseases in children including nephrotic and nephritic syndromes • Identify the difference between upper and lower urinary tract hematuria • Explain the common causes of proteinuria	Pediatrics	Interactive Lecture
• Discuss diseases associated with nephrotic and nephritic syndrome	Pathology	Interactive Lecture
• Describe the diagnosis and management of o Acute kidney injury (AKI) o Nephrotic syndrome	Nephrology	Interactive Lecture
• Relate clinical signs and symptoms of renal disease to underlying pathophysiology of Tubulointerstitial disease Nephritic & Nephrotic syndrome	Pathology	Interactive Lecture
• Discuss the mechanism of action, therapeutic uses, pharmacokinetic profile and adverse effects of various types of diuretics	Pharmacology	Small Group Discussion

• Describe the pathophysiology, morphology and clinical features in Glomerular conditions associated with systemic disease	Pathology	Interactive Lecture
CHRONIC KIDNEY DISEASES (CKD) and RENAL REPLACEMENT THERAPY(RRT)		
• Describe the diagnosis and management of chronic Kidney diseases	Nephrology	Interactive Lecture/Case-Based Discussion
• Discuss the ethical issues in the management of patients with end-stage-renal diseases including issues surrounding resource allocation such as dialysis and transplantation	Urology	Interactive Lecture
• Describe the major characteristics of the renal replacement therapy RRT modalities • Identify indications and contraindications for RRT • Compare RRT to intermittent dialysis therapy	Nephrology	Interactive Lecture
• Discuss Acute kidney injury and chronic kidney diseases	Pediatrics	Interactive Lecture
BENIGN PROSTATIC HYPERTROPHY, TUMOURS OF URINARY SYSTEM		
• Discuss Benign Prostatic Hyperplasia and Prostatic carcinoma as a cause of urinary outflow obstruction • Explain the genetics, pathogenesis, morphology and clinical features of Prostatic carcinoma	Pathology	Interactive Lecture
• Describe approaches for evaluating and treating diseases of prostate	Urology	Interactive Lecture
• Classify the risk factors, histology, pathophysiology & clinical features of renal cancers • Classify Urothelial tumors • Discuss etiology, pathogenesis, morphology and clinical features of urothelial tumors	Pathology	Interactive Lecture
• Describe the evaluation, diagnosis and management of kidney tumors	Urology	Interactive Lecture
• Interpret imaging modalities including IVP/US/Renal CT and pyelography used in the diagnosis of renal pathologies	Radiology	Small Group Discussion
COMMNUNITY MEDICINE		
• Explain the concept of demography in Pakistan	Community	Interactive Lectures
• Discuss the determinants of fertility in a population and its		

concept in health system of Pakistan	Medicine	
• Describe the determinants of mortality and its role in demography of Pakistan		
• Distinguish the various measures of morbidity and its impact on population		
• Interpret the population pyramid and its various applications		
• Explain the balancing equation and its application in different scenarios • Explain demographic transition		
FORENSIC MEDICINE		
Rape • Explain Legal definition of rape and its types • Describe procedure of medico-legal examination of rape victim which include: o Consent o Specific history related to alleged offence o General examination o Physical examination o Examination of genitalia	Forensic Medicine	Interactive Lectures
Examination of Accused in alleged rape • Describe procedure of medico-legal examination of accused in alleged rape which include: o Medicolegal Examination of o Consent o History o General examination o Physical examination o Examination of genitalia		
Discuss: • Sexual offences • Sexual deviations/ perversions • Drug-facilitated sexual assault (Date rape)		Small Group Discussion
Sodomy • Describe medicolegal examination of passive and active agents in an alleged case of *sodomy*	Forensic Medicine	Interactive Lecture
Forensic specimens collection in sex- offence • Discuss the process of specimen collection which include: o The purpose of forensic specimens o Specimen collection techniques		

○ Laboratory Diagnostic tests		
• Discuss the types, signs & symptoms, treatment, post mortem appearance and medicolegal importance of ○ Spinal poisons ○ Animal poisons ○ Therapeutic drug poisoning/ overdosage		Small Group Discussion
• State medicolegal report in sexual assault case & presenting evidence in court		Interactive Lecture
• Discuss the types, Signs & Symptoms, treatment, post mortem appearance and medicolegal importance ○ Cardiac poisons ○ Irrespirable gases		Small Group Discussion

Apart from attending daily scheduled sessions, students too should engage in self-study to ensure that all the objectives are covered.

LEARNING RESOURCES

SUBJECT	*RESOURCES*
ANATOMY	**A. GROSS ANATOMY** 1. K.L. Moore, Clinically Oriented Anatomy **B. EMBRYOLOGY** 1. Keith L. Moore. The Developing Human 2. Langman's Medical Embryology
COMMUNITY MEDICINE	**TEXT BOOKS** 1. Community Medicine by Parikh 2. Community Medicine by M Illyas 3. Basic *Statistics* for the Health Sciences by Jan W Kuzma
FORENSIC MEDICINE	**TEXT BOOKS** 1. Nasib R. Awan. Principles and practice of Forensic Medicine 1st ed. 2002. 2. Parikh, C.K. Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology. 7th ed.2005. **REFERENCE BOOKS** 3. Knight B. Simpson's Forensic Medicine. 11th ed.1993. 4. Knight and Pekka. Principles of forensic medicine. 3rd ed. 2004 5. Krishan VIJ. Text book of forensic medicine and toxicology (principles and practice). 4th ed. 2007 6. Dikshit P.C. Text book of forensic medicine and toxicology. 1st ed. 2010 7. Polson. Polson's Essential of Forensic Medicine. 4th edition. 2010. 8. Rao. Atlas of Forensic Medicine (latest edition). 9. Rao.Practical Forensic Medicine 3rd ed ,2007. 10. Knight: Jimpson's Forensic Medicine 10th 1991,11th ed.1993 11. Taylor's Principles and Practice of Medical Jurisprudence. 15th ed.1999 **CDs:** 1. Lectures on Forensic Medicine. 2. Atlas of Forensic Medicine. **WEBSITES:** www.forensicmedicine.co.uk
GENERAL MEDICINE	**REFERENCE BOOKS:** 1. Hutchison's Clinical Methods, 23rd Edition 2. MacLeod's clinical examination 13th edition 3. Davidson's Principles and Practice of Medicine 4. Kumar and Clark's Clinical Medicine 5. HCAI guidelines CDC 6. WHO TB guidelines

PATHOLOGY/MICROBIOLOGY	**TEXT BOOKS** 1. Robbins & Cotran, Pathologic Basis of Disease, 9th edition. 2. Rapid Review Pathology, 4th edition by Edward F. Goljan MD
	WEBSITES: 1. http://library.med.utah.edu/WebPath/webpath.html 2. http://www.pathologyatlas.ro/
PEDIATRICS	**TEXT BOOK:** 1. Basis of Pediatrics (8th Edition Pervez Akbar)
PHARMACOLOGY	**A. TEXT BOOKS** 1. Lippincot Illustrated Pharmacology 2. Basic and Clinical Pharmacology by Katzung
PHYSIOLOGY	**A. TEXTBOOKS** 1. Textbook Of Medical Physiology by Guyton And Hall 2. Ganong ' S Review of Medical Physiology 3. Human Physiology by Lauralee Sherwood 4. Berne & Levy Physiology 5. Best & Taylor Physiological Basis of Medical Practice

ADDITIONAL LEARNING RESOURCES

Hands-on Activities/ Practical	Students will be involved in Practical sessions and hands-on activities that link with the Renal and Excretory module-II to enhance learning.
Labs	Utilize the lab to relate the knowledge to the specimens and models available.
Skills Lab	Provides the simulators to learn the basic skills and procedures. This helps build confidence when approaching patients in real settings.
Videos	Familiarize the student with the procedures and protocols to assist patients.
Computer Lab/CDs/DVDs/Internet Resources:	To increase knowledge and motivation of students through the available internet resources and CDs/DVDs. This will be an additional advantage to meaningful learning.
Self Learning	Self Learning is when students seek information to solve cases, read through different resources and discuss among peers, and with the faculty to clarify the concepts.

ASSESSMENT METHODS:

Theory:

- **Best Choice Questions (BCQs)** also known as MCQs (Multiple Choice Questions) are used to asses objectives covered in each module.

  - A BCQ has a statement or clinical scenario followed by four options (likely answer).
  - Students after reading the statement/scenario select ONE, the most appropriate response from the given list of options.
  - **Correct answer carries one mark, and incorrect 'zero mark'. There is no negative marking.**
  - Students mark their responses on specified computer-based/OMR sheet designed for LNHMC.

- **EMQs:**
  - An EMQ has:
    - An option list of 5-15 which may be nerve supply, functions, diagnosis, investigations etc
    - A Lead In –Statement/Question
    - Two to four Stems or Clinical Scenarios
  - For each stem or clinical scenario, the student should choose the most appropriate option from the option list.
  - A single option can be used once, more than once or not at all.
  - Correct answer carries one mark and incorrect 'zero mark'. There is **NO** negative marking.
  - Student mark their responses on a specified computer-based sheet for EMQs.

OSPE/OSCE: Objective Structured Practical/Clinical Examination:

- Each student will be assessed on the same content and have same time to complete the task.
- Comprise of 12-25 stations.
- Each station may assess a variety of clinical tasks, these tasks may include history taking, physical examination, skills and application of skills and knowledge
- Stations are observed, unobserved, interactive and rest stations.
- Observed and Interactive Stations:
  - They will be assessed by internal or external examiners through structured viva or tasks.
- Unobserved Stations:
  - It will be static stations in which there may be an X-ray, Labs reports, pictures, clinical scenarios with related questions for students to answer on the provided answer copy.
- Rest station
  - It is a station where there is no task given and in this time student can organize his/her thoughts.

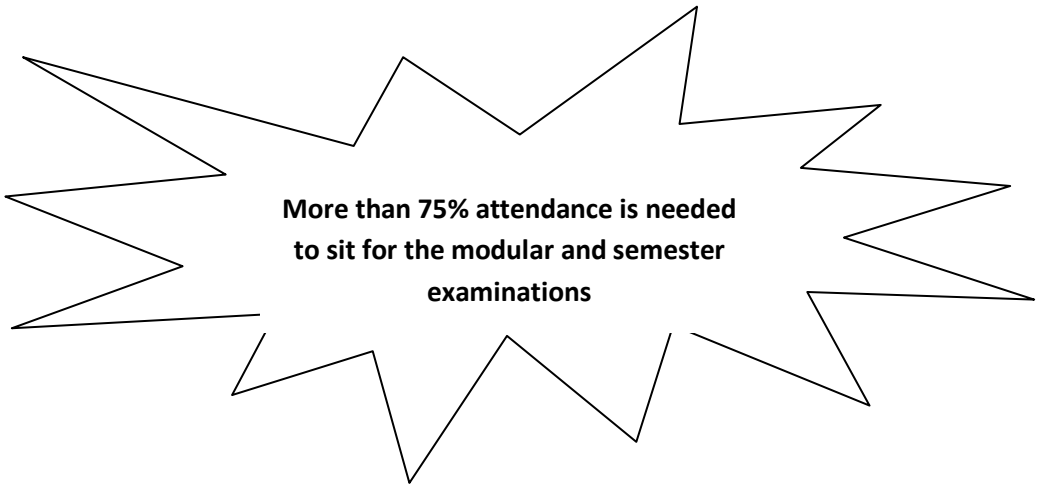
LNHMC Internal Evaluation Policy

- Students will be assessed to determine achievement of module objectives through the following:
- **Module Examination:** will be scheduled on completion of each module. The method of examination comprises theory exam which includes BCQs and OSPE (Objective Structured Practical Examination).
- **Graded Assessment of students by Individual Department**: Quiz, viva, practical, assignment, small group activities such as CBL, TBL, TOL, online assessment, ward activities, examination, and log book.
- Marks of both modular examination and graded assessment will constitute 20% weightage.
- As per JSMU policy, this 20% will be added by JSMU to Semester Examination.

Example : Number of JSMU Marks allocated for Semester Theory and Internal Evaluation			
Semester	**Semester Examination Theory Marks**	**Internal Evaluation (Task Presentation + Assignments + Modular Exam**	**Total (Theory)**
	80%	20%	100%

Formative Assessment

- Individual department may hold quiz or short answer questions to help students assess their own learning. The marks obtained are not included in the internal evaluation



MODULAR EXAMINATION RULES & REGULATIONS (LNH&MC)

- Student must report to examination hall/venue, 30 minutes before the exam.
- **Exam will begin sharp at the given time.**
- No student will be allowed to enter the examination hall after 15 minutes of scheduled examination time.
- Students must sit according to their roll numbers mentioned on the seats.
- **Cell phones are strictly not allowed in examination hall.**
- If any student is found with cell phone in any mode (silent, switched off or on) he/she will be not be allowed to continue their exam.
- No students will be allowed to sit in exam without University Admit Card, LNMC College ID Card and Lab Coat
- Student must bring the following stationary items for the exam: Pen, Pencil, Eraser, and Sharpener.
- Indiscipline in the exam hall/venue is not acceptable. Students must not possess any written material or communicate with their fellow students.

SEMESTER EXAMINATION RULES & REGULATIONS OF JINNAH SINDH MEDICAL UNIVERSITY (JSMU)

- In one academic year there will be two semesters. The semester duration is approximately sixteen/seventeen weeks.
- Each semester may have two to three modules from two to eight weeks duration.

JSMU EXAMINATIONS:

- **JSMU** will schedule and hold Semester Examinations on completion of each semester.
- In one academic year, there will be two semester examinations and one Retake Examination.

MBBS Fourth year:

- **Semester VII examination** is scheduled on completion of **EYE**, Orthopedics and Reproductive System-II modules.
- **Semester VIII examination** is scheduled on completion of ENT/EYE, Dermatology, Plastic Surgery & Burns, Neuro-Sciences-II & Psychiatry , Genetics and Rehabilitation modules.

Examination Protocols:

- In each semester, module will be assessed by theory paper comprising MCQs and EMQs. For example semester 8 will have separate theory paper of **EYE**, Dermatology, Plastic Surgery & Burns, Neuro-Sciences-II & Psychiatry, Genetics and Rehabilitation modules.
- There will be one OSPE (Objective Structured Practical Examination)/OSCE (Objective Structured Clinical Examinations) which will cover all three modules of semester seven.

1. Theory

- Theory paper will comprise of 80 one best type MCQs and 20 EMQs.
- Time duration for theory paper will be 120 minutes.
- Students will mark their responses on JSMU specified response sheets assessed by computer software.
- It will carry out 80% contribution in theory results of the Semester.
- There is no negative marking.

2. OSPE/OSCE:

- It may comprise between 12- 25 stations. Each station will carry 10 marks.

3. JSMU Grading System

- It will be based on GPA – 4 system

Marks obtained in Percentage range	Numerical Grade	Alphabetical Grade
80-100	4.0	**A+**
75-79	4.0	**A**
70-74	3.7	**A-**
67-69	3.3	**B+**
63-66	3.0	**B**
60-62	2.7	**B-**
56-59	2.3	**C+**
50-55	2.0	**C**
<50 Un-grade-able	0	**U**

- A candidate obtaining GPA less than 2.00 (50%) is declared un-graded (fail).
- Cumulative transcript is issued at the end of clearance of **all** modules.

4. Retake Examination

- Retake examination will be held after each semester examination as per meeting held on 12 April 2017 (Ref.No.JSMU/REG/2017/-314)

- Retake examinations are for those students who fail in semester examinations and those who have passed semester examinations with GPA less than 3.0 may reappear in respective retake examination to improve grades.

- The format of the retake examination is exactly the same as in semester examinations.

- Retake examination will be conducted 3 weeks after declaration of results.

5. Promotion to next class

- Students who pass both semester examinations are promoted from first year to second year.

- Students who fail the MBBS first year semester retake examination will be promoted to second year.

- Students will be promoted from **second year to third year and onward only** if they have passed the semester examinations of that year.

- Clearance of all modules and their components of semester one to four are mandatory for promotion from second year to third year (as per PMDC rules).

- As per PMDC rules any candidate failing to clear a module or its component in four (1+3) attempts is **NOT** allowed to carry out further medical education.

- Clearance of all modules and their components of semester/s are mandatory for promotion from third year onward.

SCHEDULE:

WEEKS	3rd Year SEMESTER 6	MONTH
WEEK 1	GIT & LIVER II MODULE	30th April 2018
WEEK 2		
WEEK 3		
WEEK 4		
WEEK 5		
WEEK 6		
WEEK 7		
WEEK 8		24th June 2018
	MODULAR EXAM	25th June & 26th June
WEEK 1	RENAL & EXCRETORY SYSTEM II MODULE	27th June 2018
WEEK 2		
WEEK 3		
WEEK 4		20th July 2018
	MODULAR EXAM	27th & 28th July 2018
WEEK 1	ENDOCRINOLOGY II MODULE	30th July 2018*
WEEK 2		
WEEK 3		
WEEK 4		25th July 2018*
	MODULAR EXAM	27th & 28th July 2018*
PREPARATORY LEAVE		
	SEMESTER EXAM	Aug 2018*

*Final dates will be announced later